WHAT IS CLAIMED IS:

1. A method for assigning orthogonal codes used for a first system and a second system in a CDMA (Code Division Multiple Access) system including channels of the first system for spreading a pilot signal, a sync signal, a paging signal and a traffic signal with orthogonal codes corresponding to a first set of one or more orthogonal code numbers in different rows from a set of orthogonal codes arranged in a matrix of m rows and m columns, and channels of the second system for spreading orthogonal codes corresponding to a second set of one or more orthogonal code numbers different from said first set of one or more orthogonal code numbers, comprising the steps of:

assigning orthogonal codes corresponding to the orthogonal code numbers of the orthogonal code set associated with at least one of 2n rows to the channels of the first system, wherein a set of the orthogonal codes are arranged in a matrix of subsets of orthogonal codes and inversed orthogonal codes, each subset including 2n rows and 2n columns; and

assigning orthogonal codes corresponding to the orthogonal code numbers of the orthogonal code set associated with at least one of the remaining rows to the channels of the second systems.

2. The method as claimed in claim 1, wherein the first system is a CDMA2000 system and the second system is an HDR (High Data Rate) system.

3. The method as claimed in claim 1, wherein the orthogonal codes assigned to the first system are Walsh codes of length 64 and the orthogonal codes assigned to the second system are Walsh codes having a length shorter than a length of the Walsh codes of the first system.

4. The method as claimed in claim 3, wherein the Walsh codes assigned to

the first system are Walsh codes of spreading factor 64 taking as a root at least two of 4-chip Walsh codes of W_0^4=0000, W_1^4=0101, W_2^4=0011 and W_3^4=0110, and the Walsh codes assigned to the second system are Walsh codes with a spreading factor of below 32, taking as a root the remaining 4-chip Walsh codes excepting said 4-chip Walsh codes used in the first system.

5. The method as claimed in claim 4, wherein the Walsh codes used in the second system are W_2^4=0011 and W_3^4=0110.

6. The method as claimed in claim 3, wherein the Walsh codes assigned to the first system are Walsh codes of spreading factor 64 taking as a root specified one of 4-chip Walsh codes of W_0^4=0000, W_1^4=0101, W_2^4=0011 and W_3^4=0110, and the Walsh codes assigned to the second system are Walsh codes with spreading factor of below 32, taking as a root the remaining 3 4-chip Walsh codes excepting said 4-chip Walsh code used in the first system.

7. The method as claimed in claim 4, wherein the Walsh codes used in the second system takes W_1^4=0101, W_2^4=0011 and W_3^4=0110 as a root.

8. A channel transmission apparatus in a CDMA system, comprising:

channel transmitters of a first system, including common channels and dedicated channels;

channel transmitters of a second system, including data channels having a data rate higher than a data rate of the first system;

an orthogonal code assignor including a table comprised of orthogonal codes to be assigned to the channels of the first system and orthogonal codes to be assigned to the second system, wherein Walsh codes assigned to the first system are Walsh codes with a length of m chips, taking as a root at least two of 4-chip Walsh codes of W_0^4=0000,

W_1^4=0101, W_2^4=0011 and W_3^4=0110, and Walsh codes assigned to the second system are Walsh codes with a length less than m chips, taking as a root the remaining 4-chip Walsh codes excepting said 4-chip Walsh codes used in the first system; and

a controller for controlling the orthogonal code assignor according to assigned channel information and applying the assigned Walsh codes to the channel transmitters of the first and second systems.

9. The channel transmission apparatus as claimed in claim 8, wherein the Walsh codes assigned to the first system are Walsh codes of spreading factor m=64 taking W_0^4=0000 and W_1^4=0101 as a root and the Walsh codes assigned to the second system are 4-chip Walsh codes of W_2^4=0011 and W_3^4=0110 with spreading factor of blow 32 chips.

10. A channel transmission apparatus in a CDMA system, comprising:

channel transmitters of a first system, including common channels and dedicated channels;

channel transmitters of a second system, including data channels having a data rate higher than a data rate of the first system;

an orthogonal code assignor including a table comprised of orthogonal codes to be assigned to the channels of the first system and orthogonal codes to be assigned to the second system, wherein Walsh codes assigned to the first system are Walsh codes with a length of m chips, taking as a root a specified one of 4-chip Walsh codes of W_0^4=0000, W_1^4=0101, W_2^4=0011 and W_3^4=0110, and the Walsh codes assigned to the second system are Walsh codes with a length of below m chips, taking as a root the remaining 3 4-chip Walsh codes excepting said 4-chip Walsh code used in the first system; and

a switch controller for controlling the orthogonal code assignor according to assigned channel information and applying the assigned Walsh codes to the channel transmitters of the first and second systems.

11. The channel transmission apparatus as claimed in claim 10, wherein the Walsh codes assigned to the first system are Walsh codes of spreading factor 64, taking W_0^4=0000 as a root, and the Walsh codes assigned to the second system are Walsh codes of spreading factor of blow 32 chips, taking W_1^4=0101, W_2^4=0011 and W_3^4=0110 as a root.

12. A channel receiving apparatus in a CDMA system, comprising:

channel receivers of a first system, including common channels and dedicated channels;

channel receivers of a second system, including data channels having a data rate higher than a data rate of the first system;

an orthogonal code assignor including a table comprised of orthogonal codes to be assigned to the channels of the first system and orthogonal codes to be assigned to the second system, wherein Walsh codes assigned to the first system are Walsh codes with a length of m chips, taking as a root at least two of 4-chip Walsh codes of W_0^4=0000, W_1^4=0101, W_2^4=0011 and W_3^4=0110, and the Walsh codes assigned to the second system are Walsh codes with a length of below m chips, taking as a root the remaining 4-chip Walsh codes excepting said 4-chip Walsh code used in the first system; and

a switch controller for controlling the orthogonal code assignor according to assigned channel information and applying the assigned Walsh codes to the channel receivers of the first and second systems.

13. The channel receiving apparatus as claimed in claim 12, wherein the Walsh codes assigned to the first system are Walsh codes of spreading factor 64, taking W_0^4=0000 and W_1^4=0101 as a root, and the Walsh codes assigned to the second system are Walsh codes of a spreading factor of blow 32 chips, taking W_2^4=0011 and W_3^4=0110 as a root.